

Ergonomics is not just for computer operators or hand tool users. It also applies to those who lift objects on the job or at home. Injuries can happen when you lift a bulky or heavy object without assistance or without following proper form. Injuries can even occur while lifting light objects repetitively (for example, carrying stacks of folders or books to shelves).

Use the ISM five-step planning process to determine the best way to perform a lifting task. Learn the proper techniques and determine if you need assistance to carry out the lifting task safely. If you feel that you cannot safely lift or move an item, let your supervisor know that additional equipment or help is required. Never overestimate your ability to perform a task.

Before lifting a heavy object, inspect the item for sharp edges or slivers. Minimize the distance you will need to carry the object and check the path for hazards. A safe lift must address the amount of weight being lifted and the manner in which the object is lifted. Follow these tips for lifting and moving heavy objects.

- Test the weight of a load before attempting to lift it.
- Firmly grip the object to be carried and evenly distribute the weight between both hands.
- Use a cart or handling aid to support the object's weight.
- Try to minimize the distance that the item is moved.

- Carry a load close to your body. Avoid lifting an item above your shoulders or below your knees.
- Use your legs for lifting as much as possible. While lifting loads that are close to the ground, sit back slightly and rise, as if getting up from a chair.
- Push or pull objects whenever possible, rather than lifting or lowering them.
- Position materials on racks or shelves in a way that makes handling easier. Place the heaviest objects at elbow height.
- Keep your torso in a neutral, upright position whenever possible when lifting a heavy load. Keep the natural curves of your neck, mid-back, and low back.
- Do not twist or bend while lifting or handling a heavy load. If you need to turn while lifting, pivot your feet by taking a step instead of twisting your back.
- Do not use jerking movements; lift with a smooth, continuous lifting motion.
- Provide elbow support for long reaches.
- Plan movement of material in direct paths — do not zigzag or backtrack.
- Avoid using stairs when handling heavy objects.
- Use a reach extender to reduce forward bending or extended reaches.

- Use a roller conveyor whenever possible.
- Use a sheet supporter, hand truck, or small overhead hoist as an aid to lifting.

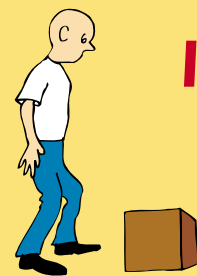
A high rate of repetition can be avoided by job rotation, self-pacing, and frequent breaks. Daily stretching and strengthening exercises may reduce the risk of muscle strain. When exercising, strengthen the stabilizing muscles of the pelvis and shoulders.

Before starting a strenuous lifting task, warm up with a less intense version of the activity—stretch and simulate the movements you will be using when lifting. Stretch your body in the same and the opposite direction to get the maximum benefit.

Take classes that are available through Hazards Control and Health Services: Back Care Workshop (HS5300), Back Injury Prevention (OH8002), and Preventing Back Injuries During Office Moves (OH8003). Health Services instructors can evaluate your group's work needs and tailor classes to fit.

You'll find more information on safe lifting practices and protection against injury in the ES&H Manual, Chapter 15.2, or on the Web (http://www.llnl.gov/es_and_h/hsm/doc_15.02/doc15-02.html#29.1). Call Health Services, 2-7459, for instructions on lifting specific items.

If you are injured at work while lifting, don't ignore the injury, report to Health Services for evaluation and treatment.



How to lift properly

1. Stand with your feet shoulder-width apart, toes pointing out.



2. Bend your knees, as you lower your body, keeping the natural curves of your back. Don't bend at the waist.



3. Keep shoulders back. Tighten your abdominal muscles.



4. Tuck your buttocks under as you come back up. Lift with your legs.



5. Keep the load close to your body.

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How to lift properly

to avoid injury

